U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

ICSJWG 2010 Fall Conference

Part 73 and Cyber Security

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NSIR/DSP

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"The trouble with quotes on the Internet is that you can never know if they are genuine."

- Abraham Lincoln

Overview

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- **10 CFR 73.54, "Protection of Digital Computer and Communications Systems and Networks"**
- **Regulatory Guide 5.71, " Cyber Security Programs for Nuclear Facilities"**
- **Cyber Security Plan (CSP) Reviews**
- **Path Forward**

10 CFR 73.54

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- **High-level, Performance-Based, Programmatic**
- **FOCUS: Protection against malicious acts**
  - **To prevent radiological sabotage**
  - **Other NRC regulations address safety during design**
- **Generic (i.e., not reactor-specific)**
- **Consistent with regulatory approach for physical security**

10 CFR 73.54

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- **Scope of the rule:**
  - **Protect those systems that fall within the scope of the rule from cyber attacks up to and including the design basis threat**
  - **Implement defensive architecture**
  - **Apply cyber security controls**
  - **Implement cyber incident response and mitigation programs**
  - **Maintain the program and address new cyber security vulnerabilities**

Regulatory Guide 5.71

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- **Components**
  - **Main Body**
  - **Appendix A (generic Cyber Security Plan template)**
  - **Appendix B (technical security controls)**
  - **Appendix C (operational/management security controls)**
- **Performance-Based, Programmatic**
  - **Consistent with NIST recommendations**
  - **Flexible and minimally prescriptive**
    - **Burden on licensees to establish effective programs**
- **Alignment with Regulatory Guide 1.152, "Criteria for Digital Computers in Safety Systems of Nuclear Power Plants"**

Regulatory Guide 5.71

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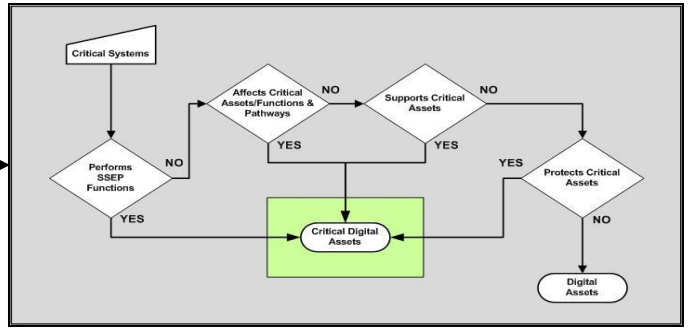
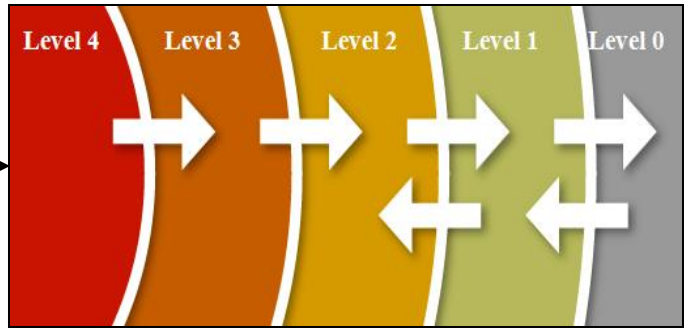
Form Cyber Security Team

Identify Critical Digital Assets



Apply Defensive Architecture



Address Security Controls

1. Address each control for each CDA
2. Or, apply alternative measures
3. Or, explain why a control is N/A

CSP Reviews

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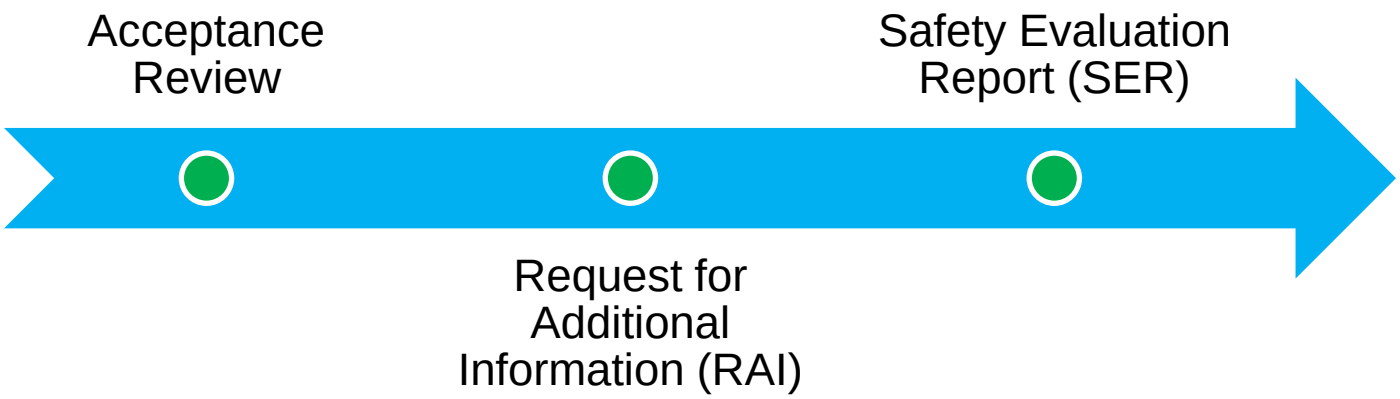
- **Currently operating nuclear power plant sites (65) have submitted their CSPs**
- **All have been "acceptable" for review**
- **Requests for additional information (RAIs) are being generated**



Path Forward

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- **Additional guidance**
  - **Development of NUREG**
    - **Explains the intent, purpose and objectives of the security controls**
    - **Provides the technical bases for inspection procedures**
    - **Industry will have a chance to comment (early 2011)**
  - **Inspection**
    - **Inspection procedures completed by early 2011**
      - **Industry participation will be requested**
      - **Pilot Plant(s)**
      - **Workshop**
    - **First inspection late 2011**
    - **Prior to fuel being allowed on-site**

URLs

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- **10 CFR 73.54**
  - http://www.nrc.gov/reading-rm/doc-collections/cfr/part073/part073-0054.html
- **Regulatory Guide 5.71**
  - http://adamswebsearch2.nrc.gov/idmws/doccontent.dll?library=PU_ADAMS^PBNTAD01&ID=100060205

"You can avoid reality, but you cannot avoid the consequences of avoiding reality."

- Ayn Rand (1905-1982)

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Backup Slides

Regulatory Guide 5.71

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- **Major Sections of RG 5.71**
  - **Cyber Security Team**
  - **Identify Critical Systems (CSs) & Critical Digital Assets (CDAs)**
  - **Defensive Architecture**
  - **Security Controls**
  - **Cyber security Incident Response and Mitigation Program**
  - **Maintain the Cyber Security Template**